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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/565,732	06/30/2006	Klaus Finkenzeller	FINK3001/JJC/PMB	1969

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EXAMINER	
TUN, NAY L	

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2612	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/565,732	FINKENZELLER, KLAUS	
	Examiner	Art Unit	
	NAY TUN	2612	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10/09/2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *10/09/2009* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claims status

1. In the amendment filed on October 10, 2009, claim 1 has been amended. Therefore, claims 1-16 are currently pending for examination.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Specification

3. The substitute specification filed 10 June 2009 has NOT been entered because it does not conform to 37 CFR 1.125(b) and (c) because: a clean copy has not been provided.

A substitute specification must not contain new matter. The substitute specification must be submitted with markings showing all the changes relative to the immediate prior version of the specification of record. The text of any added subject matter must be shown by underlining the added text. The text of any deleted matter must be shown by strike-through except that double brackets placed before and after the deleted characters may be used to show deletion of five or fewer consecutive characters. The text of any deleted subject matter must be shown by being placed within double brackets if strike-through cannot be easily perceived. An accompanying clean version (without markings) and a statement that the substitute specification contains no new matter must also be supplied. Numbering the paragraphs of the specification of record is not considered a change that must be shown.

Drawings

4. Objections to drawings from previous office action are withdrawn and substitute drawings filed on 10/09/2009 are entered.

Claim Rejections - 35 USC § 103

5. Claims 1-6, 8-12 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Schuermann** (U. S. Patent No. 5,287,112) in view of **Charrat** et al. (hereinafter "**Charrat**" - U.S. Patent No. 6,905,074).

Regarding claim 1, **Schuermann** discloses a communication apparatus for setting up a data connection between intelligent devices, comprising:

• a transmission oscillator (resonant circuit 28) for carrying out a contactless data exchange, said oscillator including a coil (Column 4 Lines 42-44 and 50-52);

• a communication element (control circuit 16) which is connected to the coil and the data processing component of an intelligent device and which emits search signals via the coil to receive a response from another intelligent device (Column 3 Lines 46-54);

Schuermann does not disclose:

• a measuring device for monitoring a property of the transmission oscillator which outputs a control signal when ascertaining a change of the monitored property; and

• a switching apparatus which is connected to the measuring device and the communication element and which switches on the communication element when it has received a control signal from the measuring device.

However, the preceding limitations are known in the art of communications. **Charrat** discloses an RFID reader with an active standby mode comprising a measuring device for monitoring a property of the transmission oscillator which outputs a control signal when ascertaining a change of the monitored property (FIG. 3, 10 and Column 9 Lines 25-31, DETC3 measures the amplitude of the envelope signal of the transmitter coil and Column 9 Lines 38-55; microprocessor compares the amplitude with the threshold and deduces the presence of a contactless integrated circuit and Column 4, Lines 43-47: variations higher than a determined variation threshold); and a switching apparatus which is connected to the measuring device and the communication element and which switches on the communication element when it has received a control signal from the measuring device (Column. 11, Lines 7-12: saving on the current consumption of a reader using the invention. Therefore, one can easily see that part of the communication circuits can be powered down/switched off by the microprocessor on standby mode since sending identification request from the reader and receiving identification message from the tag do not need to be performing during the standby mode).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine **Schuermann** with **Charrat** in order to send the identification request from the reader after the non-contact IC enters the proximity of the reader and therefore, prolongs battery life and/or saves energy of the reader (**Charrat**: Column 11 Lines 1-12).

Regarding claim 2, **Schuermann** in view of **Charrat** teaches the apparatus of claim 1 as discussed above. **Schuermann** further discloses an assembly that is switchable to the transmission oscillator via a switch (the tuning circuit consisting of capacitor 56 and resistor 58 connects to resonant circuit 34 via switch 54 to form new resonant circuit 60), said assembly

causing an increase in the bandwidth of the oscillating circuit (Column 5 Lines 47-59; one of ordinary skill in the art could combine this arrangement from the transponder with the interrogator since it is known in the art that interrogators can act as transponders and receive data from other transponders).

Regarding claim 3, **Schuermann** in view of **Charrat** teaches the apparatus of claim 2 as discussed above. **Schuermann** further discloses that the assembly is a resistive element (the tuning circuit is a resistive element since it comprises a resistor).

Regarding claim 4, **Schuermann** in view of **Charrat** teaches the apparatus of claim 1 as discussed above. **Schuermann** further discloses including an assembly (capacitor 52) switchable to the transmission oscillator via a switch (switch 50), said assembly causing a change in the resonant frequency of the transmission oscillator (Column 5 Lines 13-19).

Regarding claim 5, **Schuermann** in view of **Charrat** teaches the apparatus of claim 4 as discussed above. **Schuermann** further discloses that the assembly causes a reduction in the resonant frequency (Column 5 Lines 13-15).

Regarding claim 6, **Schuermann** in view of **Charrat** teaches the apparatus of claim 4 as discussed above. **Schuermann** further discloses that that the assembly comprises a capacitor (see above).

Regarding claim 8, **Schuermann** in view of **Charrat** teaches the apparatus of claim 1 as discussed above. **Schuermann** in view of **Charrat** does not explicitly disclose the switching apparatus has a time controller for cyclically switching the measuring device on and off.

However, **Charrat** further discloses that pulses of 10 to 50 microseconds spaced out by

200ms (Column 7 Lines 17-37). Since the DETC circuit does not need to measure the amplitude between the pulses, one can easily see that it can be switched off for 200ms after detection of each pulse and switched on cyclically.

Therefore, it would have been obvious to the one of the ordinary skill in the art at the time of the invention was made to provide a switching apparatus with a time controller for cyclically switching the measuring device on and off in order to save the power more by turning off the idling components of the circuit and turning on only when required.

Regarding claim 9, **Schuermann** in view of **Charrat** teaches the apparatus of claim 8 as discussed above. **Charrat** further discloses that the time controller keeps the on state of the measuring device shorter than the off state (Column 7 Lines 17-27 and as modified in claim 8 above, pulse width i.e. the on state of the DETC is 10-50 microseconds long and off state will be 200ms).

Regarding claim 10, the combination of **Schuermann** in view of **Charrat** teaches the apparatus of claim 8 as discussed above. The combination further discloses that the measuring device stores a measuring value obtained (**Charrat**: Column 9 Lines 37-55).

Regarding claim 11, **Schuermann** in view of **Charrat** and further in view of Nichols teaches the apparatus of claim 10 as discussed above. The combination further teaches the measuring device emits a control signal to the switching apparatus when a measuring value deviates from the average of the measuring values stored with the previous on phases (**Charrat**: Column 9 Lines 37-55)

Regarding claim 12, **Schuermann** in view of **Charrat** teaches the apparatus of claim 8

as discussed above. While the combination does not expressly disclose that when the intelligent device is switched on, the communication element is initially on and the measuring device off, this is an obvious matter of design choice (the specification of the present application does not seem to give a reason for or an advantage to having this arrangement), which does not patentably distinguish the invention over the prior art.

Regarding claim 15, **Schuermann** discloses a communication element designed to use a coil, which is part of a transmission oscillator, for automatically setting up a data connection with an intelligent device likewise having a communication element and a coil (see regarding claim 1 above). **Schuermann** does not disclose the method steps of:

• monitoring a parameter of the transmission oscillator by means of a measuring device;

• producing a control signal upon the occurrence of a change in the monitored property; and

• switching on the communication element by a switching apparatus due in response to the control signal.

However, the preceding limitations are known in the art of communications. **Charrat** discloses an RFID reader with an active standby mode comprising a measuring device for monitoring a property of the transmission oscillator which outputs a control signal when ascertaining a change of the monitored property (FIG. 3, 10 and Column 9 Lines 25-31, DETC3 measures the amplitude of the envelope signal of the transmitter coil and Column 9 Lines 38-55; microprocessor monitors/compares the amplitude with the threshold and deduces the presence of a contactless integrated circuit and Column 4, Lines 43-47: variations higher than a determined variation threshold); and a switching apparatus which is connected to the measuring device and

the communication element and which switches on the communication element when it has received a control signal from the measuring device (Column. 11, Lines 7-12: saving on the current consumption of a reader using the invention. Therefore, one can easily see that part of the communication circuits can be powered down/switched off by the microprocessor on standby mode since sending identification request from the reader and receiving identification message from the tag do not need to be performing during the standby mode).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine **Schuermann** with **Charrat** in order to send the identification request from the reader after the non-contact IC enters the proximity of the reader and therefore, prolongs battery life and/or saves energy of the reader (**Charrat**: Column 11 Lines 1-12).

6. Claims 7 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Schuermann** in view of **Charrat** as applied to claim 1 above, and further in view of **Watkins** (U.S. Patent No. 6,317,027).

Regarding claim 7, **Schuermann** in view of **Charrat** teaches the apparatus of claim 1 as discussed above. The combination does not teach that the measuring frequency of the measuring device is sweepable over a predetermined frequency domain.

However, the preceding limitation is known in the art of communications. **Watkins** discloses an auto-tuning RFID reader, wherein a range of frequencies are scanned when searching for devices/transponders (Figure 2 and Column 3 Lines 44-62). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the apparatus of

Schuermann in view of **Charrat** with the addition of sweeping over a frequency range as the motivation lies in **Watkins** that off-frequency tags/transponders can be more reliably detected (Column 2 Lines 13-23).

Regarding claim 16, **Schuermann** in view of **Charrat** teaches the method of claim 16 as discussed above. The combination does not teach that the measuring frequency of the measuring unit is swept over a given frequency domain during the monitoring of the property.

However, the preceding limitation is known in the art of communications. **Watkins** discloses an auto-tuning RFID reader, wherein a range of frequencies are scanned when searching for devices/transponders (Figure 2 and Column 3 Lines 44-62). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the method of **Schuermann** in view of **Charrat** with the addition of sweeping over a frequency range as the motivation lies in **Watkins** that off-frequency tags/transponders can be more reliably detected (Column 2 Lines 13-23).

7. Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Schuermann** in view of **Charrat** as applied to claim 1 above, and further in view of **Flaxl** (U.S. Patent No. 5,491,715).

Regarding claim 13, the combination of **Schuermann** in view of **Charrat** teaches the apparatus of claim 1 as discussed above. The combination does not disclose that the measuring device has a first oscillator device coupled at least temporarily with the coil for producing a first oscillation signal, and a second oscillator device for producing a second oscillation signal.

However, the preceding is known in the art of communications. **Flaxl** discloses an antenna tuning method and circuit, wherein a first oscillator device (antenna resonance circuit 18) and a second oscillator device (osc/xmit circuitry 44) are fed into a phase comparator to perform adjustments to the device based on feedback (Figure 7 and Column 5 Line 33 - Column 4 Line 6). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the apparatus of **Schuermann** in view of **Charrat** with the circuit disclosed in **Flaxl** as the phase comparison circuit in **Flaxl** in addition to the change in magnitude in order to ascertain a change in the signal from the coil.

Regarding claim 14, **Schuermann** in view of **Charrat** and further in view of **Flaxl** teaches the apparatus of claim 13 as discussed above. The combination further teaches producing the control signal for the switching apparatus on the basis of a phase relation between the first and second oscillation signals or signals derived therefrom (in **Flaxl**, the phase comparator 60 outputs a signal to the control unit 50 which adjusts the antenna resonance circuit 18).

Response to Arguments

8. Applicant's arguments filed on October 10, 2009 have been fully considered but they are moot in view of new grounds of rejection.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Johnson (US 6476708) discloses a method is provided for operating an RF transponder system to detect the presence of an RFID device in the proximal space of an RF reader unit having an excitation signal generator circuit and an RFID device detection circuit.

Contact Information

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nay Tun whose telephone number is (571) 270-7939. The examiner can normally be reached on Mon-Thurs from 9:00-5:00.
If attempts to reach the examiner by telephone are unsuccessful, the examiner's Supervisor, Daniel Wu can be reached on (571) 272-2964. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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